

1. (Currently Amended) A method to determine the spin-up parameters of a spindle motor in a disk drive including the steps of:

determining ~~a the~~ temperature of ~~a the~~ voice control motor (VCM); and

using the temperature of the VCM to determine the spin-up parameters of the spindle motor,

wherein the spin-up parameters comprise at least one of:

a. spin-up current;

b. spin-up voltage; and

c. commutation time.

2. (Cancelled)

3. (Original) The method of claim 1, wherein the step of determining the temperature comprises measuring resistance of a coil of the VCM.

4. (Original) The method of claim 1, further comprising the step of setting a time out period after which the spindle motor is turned off if it has not reached a desired operation velocity, wherein the time out period is increased with a decrease in the temperature.

5-6. (Cancelled)

7. (Currently Amended) A method to control start up in a disk drive, the method comprising the steps of:

measuring a resistance of a coil in a voice coil motor (VCM) of the disk drive;  
determining a temperature of the coil of the VCM based on the measured resistance; and  
increasing ~~the~~ torque applied to a spindle motor during startup to correspond with a decrease in  
the temperature determined.

8. (Currently Amended) The method of claim 7, wherein the step of increasing the torque comprises  
increasing current levels applied to coil windings of the spindle motor.

9. (Currently Amended) The method of claim 7, wherein the step of increasing the torque comprises  
increasing voltage levels applied to coil windings of the spindle motor.

10. (Currently Amended) The method of claim 7, wherein the step of increasing the torque comprises  
controlling a sequence of commutation states applied to windings of the spindle motor during startup.

11. (Currently Amended) The method of claim 7, wherein the step of increasing the torque comprises  
controlling timing of signals applied to coil windings of the spindle motor.

12. (Currently Amended) The method of claim 7, further comprising the step of setting a time out period  
after which the spindle motor is turned off if it has not reached a desired operation velocity, wherein the  
time out period is increased with a the decrease in the temperature.

13. (Currently Amended) A method to control start up in a disk drive, the method comprising the steps of:

measuring a resistance of a coil in a voice coil motor (VCM) of the disk drive;

determining a temperature of the coil of the VCM based on the measured resistance;

determining a time out period ~~for after which~~ the disk drive ~~to should~~ be powered down if a spindle motor has not reached a desired operational velocity, wherein the timeout period is increased with a decrease in the determined temperature;

detecting whether the spindle motor reaches the operational velocity within the time out period; and

providing a startup failure signal to enable power down of the spindle motor when the spindle motor does not reach the desired operational velocity within the time out period.

14. (Currently Amended) The method of claim 13, further comprising the step of:

setting current levels to apply to coil windings of the spindle motor during startup of the spindle motor, the current levels being set to increase ~~the~~ torque applied to the spindle motor during startup to correspond with ~~the~~ a decrease in the determined temperature ~~estimate~~.

15. (Currently Amended) The method of claim 13, further comprising the step of:

applying a sequence of voltages to coil windings of the spindle motor to generate a torque to cause movement of the spindle motor, wherein the torque generated has an increased value corresponding with ~~the~~ a decrease in the determined temperature ~~estimate~~.

16. (Currently Amended) The method of claim 13, further comprising the step of:

applying a sequence of commutation states to coil windings of the spindle motor during startup to generate a torque to cause movement of the spindle motor, wherein the torque generated by the sequence of commutation states has an increased value corresponding with the a decrease in the determined temperature ~~estimate~~.

17. (Currently Amended) The method of claim 13, further comprising the step of:

controlling timing of signals applied to coil windings of the spindle motor to generate a torque to cause movement of the spindle motor, wherein the torque generated by the sequence of commutation states has an increased value corresponding with the a decrease in the determined temperature ~~estimate~~.